

Lithium Polyacrylate Paali Aqueous Binder For Silicon Oxide Anode Slurry Preparation

Item Number: FZ29



Introduction

Optimize high-capacity battery research with premium lithium polyacrylate PAALi binder for silicon oxide anodes, delivering exceptional mechanical elasticity, reduced electrolyte swelling, stable initial coulombic efficiency, and superior cycle life across advanced coin and pouch cell applications.

[Learn More](#)

Application	Description	Key Benefit
Silicon-Carbon & SiOx Anodes	Formulation of high-capacity negative electrodes incorporating silicon monoxide, pure silicon nanoparticles, and graphite composites.	Suppresses active material pulverization and maintains electrical contact paths across hundreds of deep charge-discharge cycles.
High-Energy Pouch Cell Prototyping	Preparation of multi-layer laminated pouch cell negative electrodes on continuous roll-to-roll coating systems.	Prevents edge cracking and delamination during automated electrode slitting, winding, and z-folding assembly operations.
Coin Cell Electrochemical Benchmarking	Formulation of small-batch electrode slurries for half-cell and full-cell academic screening and fundamental kinetics research.	Ensures exceptional repeatability across test matrices with minimal slurry preparation volume and rapid dispersion.
Fast-Charging Lithium-Ion Cells	Electrode fabrication for high-rate C-rate battery systems requiring continuous electron and lithium-ion conduction pathways.	Maintains stable interfacial resistance and prevents structural breakdown under severe thermal and mechanical operational stress.
Solid-State Battery Anode Interfaces	Development of composite anode interlayers interfacing with solid polymer or sulfide-based electrolytes.	Enhances interfacial wettability and mechanical compliance between rigid active particles and solid-state separator layers.
Advanced Conductive Slurry Formulations	Co-dispersion of silicon oxide materials with multi-walled carbon nanotubes (MWCNTs) and conductive carbon black.	Improves binder-conductive agent bridging, enabling lower conductive additive ratios and increasing overall active material loading.

Specification Parameter	Value / Range
Product Item Number	FZ29
Chemical Composition	Lithium Polyacrylate (PAALi) Aqueous Solution
Physical Appearance	Light yellow transparent aqueous solution
Viscosity (25°C)	24,000 mPa·s
Solid Content	6.0 wt%
pH Value	7.5 – 8.0
Electrolyte Swelling Ratio	< 10% (1M LiPF6 in EC:DMC:DEC)
Solvent System	Deionized Water (Aqueous)
Packaging Specification	100 g / bottle
Recommended Storage Conditions	Sealed container, ambient room temperature (15°C – 25°C), dry environment
Recommended Slurry Processing	Adjust water volume based on desired solid loading; screen, degas, and filter prior to coating